

REMARKS

The Invention

The invention is based on the identification of T-cell epitopes in Japanese pollen allergen molecules. Thus, the invention features peptides containing the T-cell epitopes and compositions containing the peptides that are useful in immunotherapy of patients with spring tree pollinosis. The peptides are also useful for diagnosis of spring tree pollinosis.

Status of the Claims

After entry of the amendments made herein, claims 1, 2, 5, 7, 11, 13, 14, 17, and 20-39 will be pending, and claims 1, 5, 29-35, 38, and 39 will be under consideration in this application, claims 2, 7, 11, 13, 14, 17, 20-28, 36 and 37 having been withdrawn as allegedly being drawn to separate inventions.

The above amendment to claim 39 is supported by the specification, e.g., at page 13, third paragraph.

No new matter is added by any of the amendments made herein to the claims.

35 U.S.C. § 112, first paragraph, rejection

Claims 5 and 33-35 stand rejected as allegedly containing subject matter that was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention.

From the comments on page 2, line 21, to page 3, line 8, Applicants understand the Examiner's position to be that the instant specification, even when considered as a whole, does not provide adequate "written description" for the term "consisting essentially of" as used in claims 5 and 33-35. While not agreeing with this position, in order to expedite prosecution of the instant application, Applicants have, as suggested by the Examiner (page 3, line 7, of the Office Action), replaced the term "consisting essentially of" in claims 5 and 33-35 with the term "comprising."

In light of these amendments, Applicants respectfully request that the rejection under 35 U.S.C. § 112, first paragraph, be withdrawn.

35 U.S.C. § 102(b) rejection

Claims 1, 5, 32, 38, and 39 stand rejected as allegedly being anticipated by WO94/01560 (the "'560 application"). Applicants respectfully traverse this rejection.

From the comments on page 3, lines 16-31, of the Office Action, Applicants understand the Examiner's position to be that: (1) in disclosing the sequence of a peptide fragment (CJ1-35) of the Japanese cedar pollen allergen Cry j I, the '560 application discloses a "part" of the SEQ ID NO:36 peptide of the instant application, which is derived from the Japanese cypress pollen allergen Cha o 1; and (2) in disclosing a Cry j I peptide fragment (CJ1-26) with an amino acid sequence identical to SEQ ID NO:28 of the instant application, the '560 application discloses the peptide of claim 39. Applicants disagree with both assertions.

In regard to assertion (1), Applicants show below the amino acid sequences of the Cha o I peptide claimed in the instant application (SEQ ID NO:36) aligned for optimum homology with CJ1-35 peptide of the '560 application:

SEQ ID NO:36: N G S A A P Q L T K N A G V L T C I L S

CJ1-35: N A G V L T C S L S K R C

As is clear from the above sequence alignment, the CJ1-35 peptide is not part of the SEQ ID NO:36 peptide for two reasons. First, the CJ1-35 peptide contains three C-terminal residues (K, R and C) not present in the SEQ ID NO:36 peptide. Moreover, while the third amino acid residue from the C-terminus of the SEQ ID NO:36 peptide is "I", the corresponding residue in the CJ1-35 peptide is "S". Thus, the CJ1-35 peptide is not "part of" SEQ ID NO:36, and does not fall within any of the present claims.

With regard to assertion (2), Applicants point out that the SEQ ID NO:28 peptide is recited solely in claim 39. The peptide specified by instant claim 39 consists of at least two T-cell epitopes of Japanese cypress pollen allergen Cha o 1 and a linker sensitive to enzyme

cleavage between two of the T-cell epitopes, at least one of the epitopes consisting of any one of the sequences listed in element (a) of claim 39 (or a part of any such sequence that has T-cell stimulating activity equivalent to that of the full-length sequence). Thus, a peptide of claim 39 could contain, for example, the peptide with SEQ ID NO:28 (or a part of the peptide that has T-cell stimulating activity equivalent to that of the full-length SEQ ID NO:28 peptide), but must also contain at least one other Cha o 1 T cell epitope.

The Examiner has pointed to no disclosure in the '560 application of a peptide containing at least two T cell epitopes of Cha o 1, one of which is SEQ ID NO:28 (or another one specified in claim 39). At most, the '560 application discloses peptides with one or more T cell epitopes of Cry j I (not Cha o 1) (see page 32, lines 18-20). In order for this rejection to stand, the Examiner would need to establish that the '560 application discloses a peptide containing not only CJ1-26 (or a T cell-stimulating part thereof), but also a second T cell epitope of Cha o 1. Furthermore, in order to anticipate claim 39, this hypothetical peptide would have to consist of such multiple Cha o 1 epitopes plus linker(s). The Examiner has not identified any peptide disclosed in the '560 application that meets all the criteria of claim 39. Thus the rejection should be withdrawn.

In light of the above considerations, the '560 application does not anticipate any of the claims presently under consideration. Applicants therefore respectfully request that the rejection under 35 U.S.C. § 102(b) be withdrawn.

Claim Objections

In paragraph 10 on page 4 of the Office Action, claims 29-31 are objected to because they are dependent on a rejected claim (claim 1). For the reasons given above, Applicants submit that claim 1 is allowable and thus that the objection is moot.

CONCLUSION

In summary, for the reasons set forth above, Applicants maintain that the claims under consideration patentably define the invention. Applicants request that the Examiner reconsider the rejections as set forth in the Office Action, and permit the claims under consideration to pass to allowance.

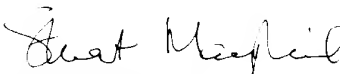
If the Examiner would like to discuss any of the issues raised in the Office Action, Applicants' undersigned representative can be reached at the telephone number listed below.

Enclosed is a Petition for an Extension of Time with the required fee. Please charge any other fees or make any credits to Deposit Account No. 06-1050, referencing Attorney Docket No. 14883-024001.

Respectfully submitted,

Date: _____

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